marked affinities throughout the whole vast assemblage of species, which at the present time includes about five hundred distinct forms.

Early Stages.—The eggs are somewhat globular, flattened at the base, and smooth. The caterpillars are cylindrical, smooth, fleshy, thicker in the anterior portion of the body than in the posterior portion, and are always provided with osmateria, or protrusive scent-organs, which, when the larva is alarmed, are thrust forth, and emit a musky odor, not highly disagreeable to the human nostrils, but evidently intended to deter other creatures from attacking them. The chrysalids are always attached by a button of silk at the anal extremity, and held in place by a girdle of silk about the middle. The chrysalids are, however, never closely appressed to the surface upon which pupation takes place.

There are about twenty-seven species of this genus found within the limits of boreal America. Our fauna is therefore much richer in these magnificently colored and showy butterflies than is the fauna of all Europe, in which but three species are known from the Dardanelles to the North Cape and Gibraltar. The genus is wonderfully developed in the tropics both of the New and the Old World, and has always been a favorite with collectors, containing many of the largest as well as the handsomest insects of the order.

(i) Papilio ajax, Linnaeus, Plate II, Fig. 14, *larva;* Plate VI, Figs, n, 12, *chrysalis* (Ajax).

Butterfly.—This insect, which is one of the most beautiful in our fauna, has been the subject of attentive study in recent years, and is now known to be seasonally polymorphic. We have given in Plate XLIV figures of several of the forms.

(a) Winter form walshi; Edwards, Plate XLIV, Fig. 4, *♀.* In this form, which emerges from chrysalids which have been

exposed to the cold of the winter, the black bands of the wings are narrower and a trifle paler than in the other forms, the tails of the hind wing tipped with white, and the crimson spot on the inner margin near the anal angle forming a conspicuous bent bar. A variety of this form, with a more or less distinct crimson line parallel to the inner margin on the upper side of the hind wing, has been named *Papilio ajax,* var. *abbotti,* by Edwards.

Another winter form, for which I propose the name floriden-